### Pursuing "Ideal" or Emphasizing "Coping"

the new definition of peakperformance and transformation of mental training pattern

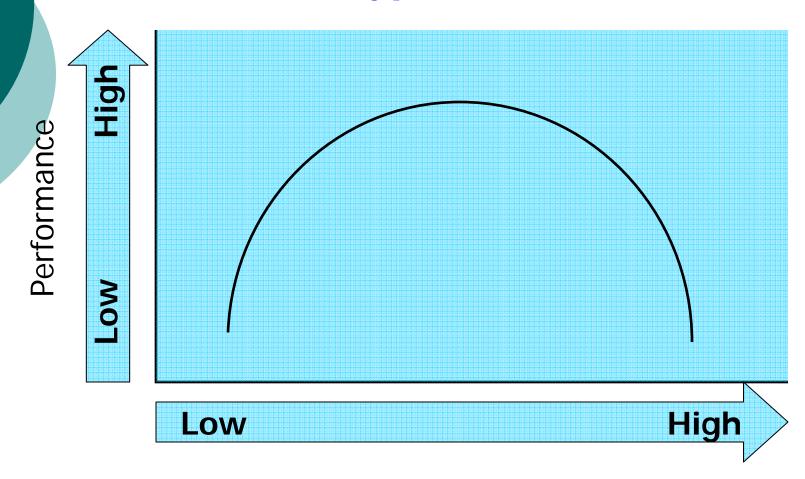
Gangyan Si

## What is peak performance?

#### Review

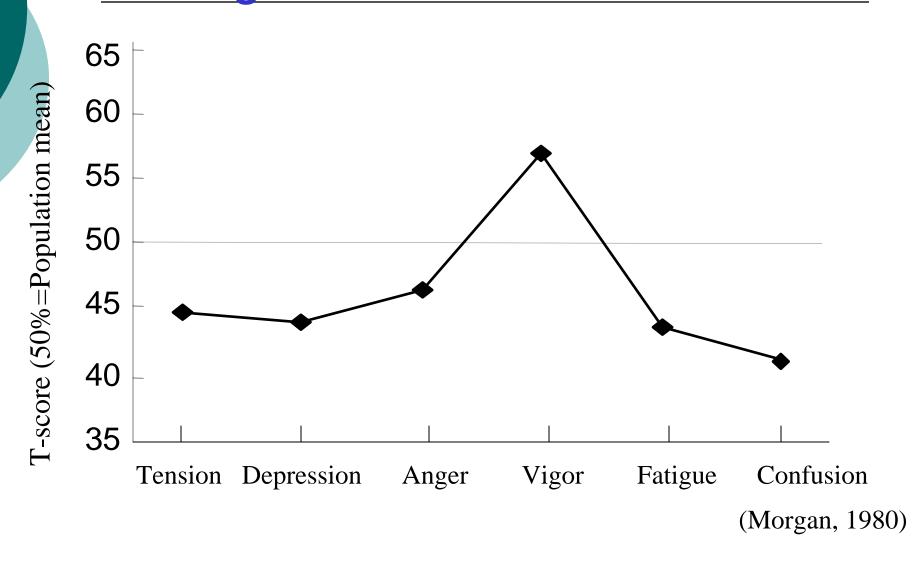
- Inverted-U Hypothesis (Yerkes & Dodson, 1908)
- Iceberg Profile (Morgan, 1980)
- Multidimensional Anxiety Theory (Martens, Vealey, & Burton, 1980)
- Catastrophe Model (Hardy & Parfitt, 1991)
- Zone of Optimal Functioning (Hanin, 1989)
- Flow Experience (Jackson, 1996)

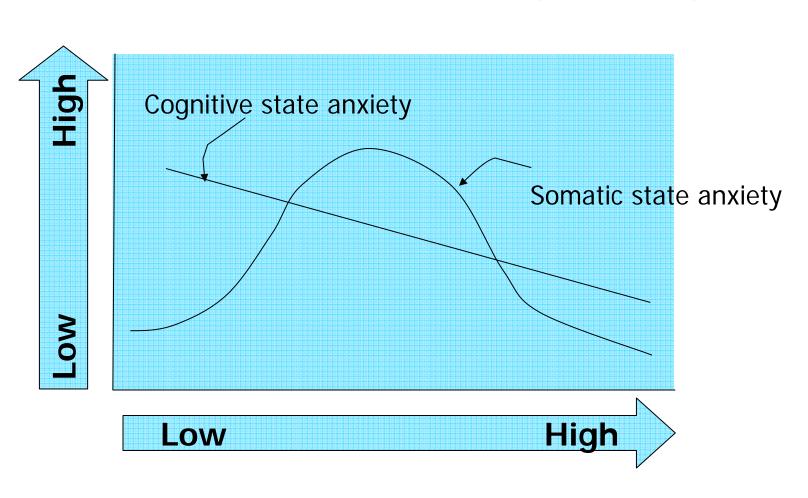
#### Inverted-U Hypothesis



Physiological arousal

#### Iceberg Profile





state anxiety

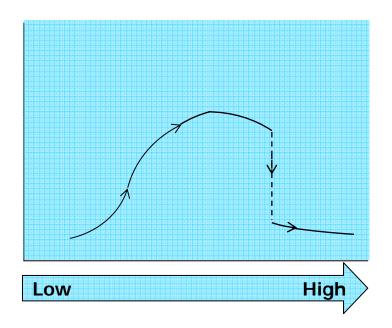
#### Catastrophe Model

Low cognitive state anxiety

Performance High High

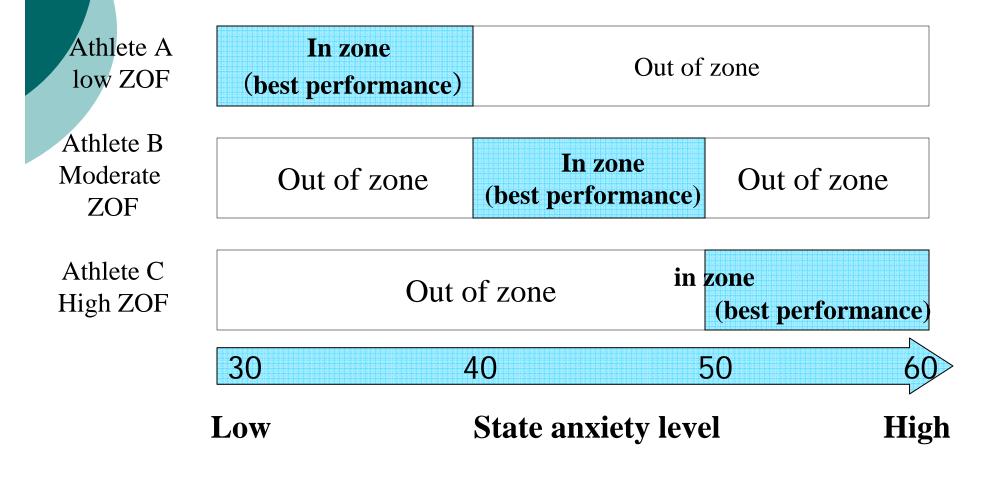
a. Physiological arousal

High cognitive state anxiety



b. Physiological arousal

#### Zone of Optimal Functioning



#### Flow Experience

The factors facilitating and hindering the appearance of flow state

Effect on flow	v state factors		
facilitating	1. Positive mental set		
	<ul><li>2 Positive pre-competition environment</li><li>3 Positive effect of competition</li></ul>		
	4. Moderate concentration		
	5. Physical preparation		
	6. Keep coherence with teammates and coaches		
hindering	1、Experiencing physical problem		
	2. Failed keeping suitable concentration		
	3. Negative mental set		
	4. lack of feedback from audiences		

#### **Summary**

The common characteristic of the above mentioned theories is that they all emphasize on pursuing "ideal" psychological state.

These theories stress on the "optimized" principle when describing and defining "peak performance" from the perspective of psychology.

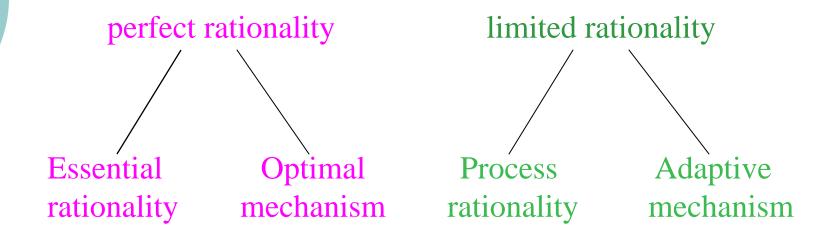
# Difficulties that ideal theories face in reality

- 1. operational issues for finding out and activating an optimal mental state.
- 2. how to keep "optimal" unchanged or not-destroyed during the intensive competitions.
- 3. psychological states prior to competition and actual performance during competition.

Reasons caused those difficulties

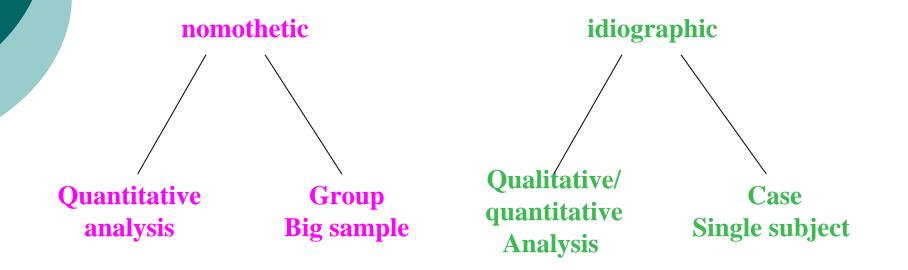
Direction to resolve them

### Reason 1: hypothesis on human's rationality



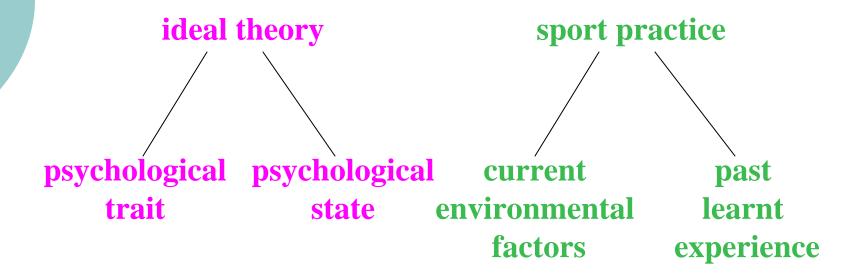
Solution: using satisfied principle to replace optimal principle

#### Reason 2: research paradigm



**Solution: idiographic** 

### Reason 3: hypothesis on the cause of sport performance



Solution: a better understanding on environmental and learning factors







#### **New Definition**

Peak performance is successful adversity coping in competitions.

(Even when athletes may not achieve a "peak" state at the time of the competition, if they can reasonably cope with most or all adversities, effectively overcome their mistakes or compensate for their loss, their performance may still be judged as successful.)

#### Three elements of new definition

#### **Adversity**

the situations which impede athletes from achieving their competitive goals.

#### **Coping**

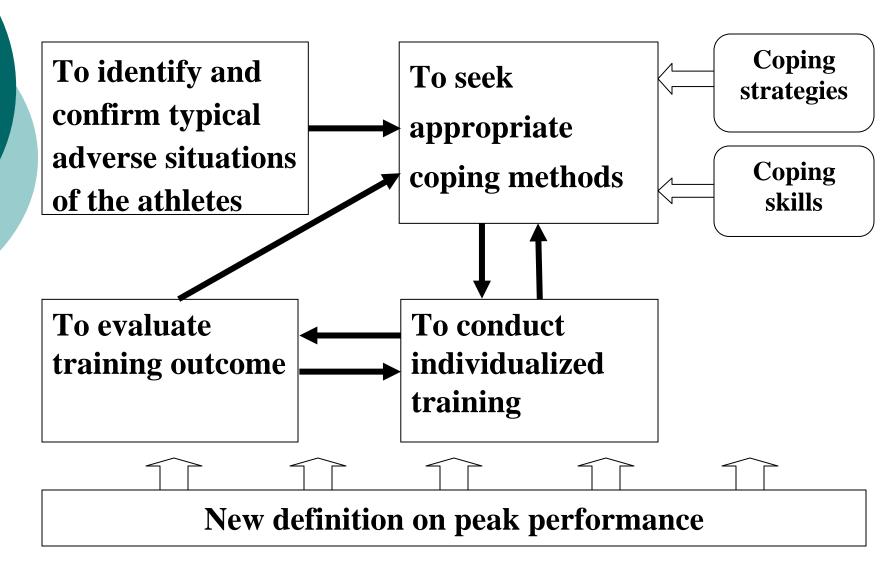
the awareness and methods to overcome or cope with adversities.

#### Rationality

to control own irrational minds and to utilize opponents' irrational minds.

### Differences between "ideal theory" and "adversity coping"

	ideal theory	adversity coping
<b>Concept</b> <b>derivation</b>	top down	bottom up
Awareness	frustration is not normal	frustration is a routine
Adaptability	emphasizing on optimal zone	emphasizing on dynamic adaptation
Operation	abstract training unstable replication	concrete training stable replication
Evaluation	subjective evaluation possible difference between sub. and obj. evaluate feeling or experience	sub. and obj. evaluation consistency between sub. and obj. evaluate rationality



Adversity Coping Training Framework (Si, 2006)

### 1. To identify and confirm typical adverse situation of the athletes

- □ To specific sport
- □ To specific competition
- To specific individual



#### 2. To seek appropriate coping methods

- Single coping strategy or method
- Integrated coping strategies or methods
- Pursuit of rationality



#### 3. To conduct individualized training

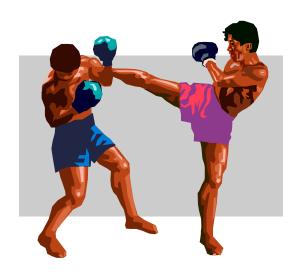
- Evaluating athlete's ability of adversity coping
- □ Strengthening athlete's awareness, learning skills, forming habits
- Transforming from training to competition
- Long period training and short period training

#### 4. To evaluate training outcome

- Evaluation on awareness, attitude, application
- □ Evaluation on improvement of target behavior
- Evaluation on rationality
- □ Evaluation on performance

#### Coping strategies

- □ Problem-focused coping
- Emotion-focused coping
- Avoidance coping
- □ "Ah Q" coping



#### "Ah Q" Coping

- ❖ 乃兵家常事
  - Winning or losing is normal in competitions
- ❖ 船到 自然直
  - The problem will resolve on its own in its own good time
- \* 其自然
  - Allow nature to take its course, for everything is pre-arranged
- ❖ 后退一步,海 天空
  - Take a step backward and you'll see things from a wider perspective

#### Prospect Theory (Kahneman, 2002)

- Most people are risk-avoiding when facing a gain situation.
- Most people are risk-preferring when facing a loss situation.
- People are more sensitive to losing than to gaining.

#### Coping skills

- Relaxation
- □ Imagery
- Concentration
- Routines

### Compared with traditional psychological training program

- 1. Coaches' involvement is strengthened.
- 2. Athletes have more direct interest and clear goal.
- 3. The training period is more flexible.

### Compared with traditional psychological training program

- 4. Diversification of evaluation (e.g., rationality)
- 5. More tightly integrated with on-field support service
- 6. More heuristic meanings (e.g., guideline of adversity coping)

### Guidelines of Adversity Coping for Athletes

- □ Frustration is a routine, while smoothness is an exception.
- ☐ There is always something happening at the wrong time
- ☐ You cannot obtain every necessary factors which can ensure your success.
- □ When a "stupid" method works, it is not "stupid" any more.
- □ A prepared plan can never be carried out exactly when confronting a strong rival.

### Guidelines of Adversity Coping for Athletes

- □ Important things are always simple things.
- □ Simple things are always hard to do.
- ☐ If you feel you still have something which needs to prepare right before the competition, it probably means that you have prepared too much.
- ☐ If you have thought about your rival in every aspect, remember that the rival has done the same thing to you.
- □ Previous success will never appear again in the way you expect.

### Guidelines of Adversity Coping for Athletes

- ☐ It is more your teammate's mistake than you rivals attack that can disturb your mood.
- ☐ If you know when to "open" and "close" your mind, your rivals will never disturb your mind.
- ☐ It is equal to suicide if you tend to be risk-avoiding when you are approaching to success.
- □ Accumulation of tiny negative thoughts would lead a suddenly mental collapse.
- □ Only have currently adaptive rationality, never have permanently entire rationality.

#### The Stockdale Paradox

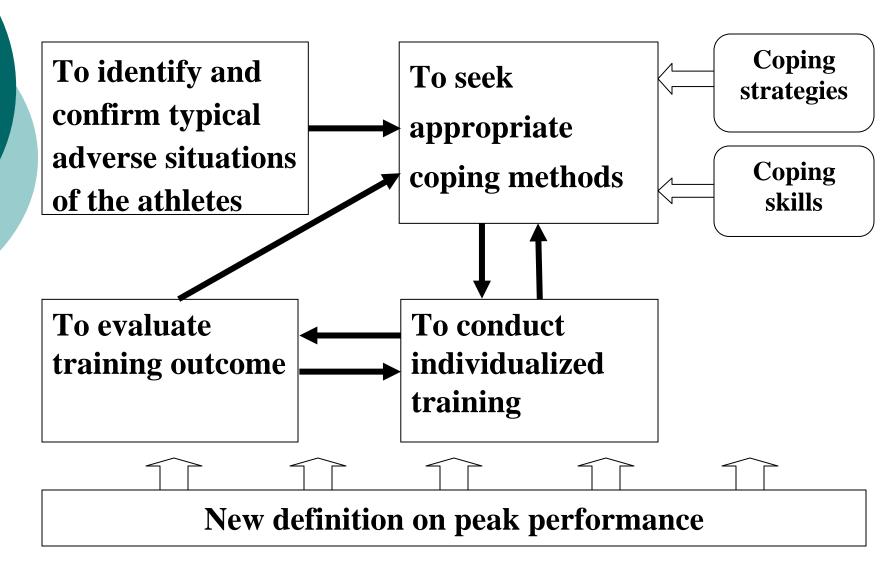
"You must maintain your faith that you can and will prevail in the end, regardless of the difficulties - and confront the most brutal facts of your current reality, whatever they might be."

——— Jim Stockdale

**«Good to great»** (Jim Collins, 2001)

#### **New Definition**

Peak performance is the successful adversity coping in competitions.



Adversity Coping Training Framework (Si, 2006)

#### **Mental Training**

From: not intentionally learn and accept adversity

To: intentionally adapt and transform adversity

#### References

- Collins, J. (2001). Good to great: Why some companies make the leap . . . and others don't. New York: Harper Business.
- Hanin, Y. L. (1989). Interpersonal and intragroup anxiety. Conceptual and methodological issues. In D Hackfort & C D Spielberger (Eds.), *Anxiety in sports: An international perspective* (pp. 19-28). Washington, DC: Hemisphere Publishing Corporation
- Hardy, L., & Parfitt, G. (1991). A catastrophe model of anxiety and performance. *British journal of psychology*, 82, 163-178
- Jackson, S. A. (1996). Toward a conceptual understanding of the flow experience in elite athletes. *Research quarterly for exercise and sport*, 67, 76-90
- Materns, R., Vealey, R. S., & Burton, D. (1990). *Competitive anxiety in sport*. Champaign, IL: Human Kinetics
- Morgan, W. P. (1980). Test of champions: The iceberg profile. *Psychology today, 14*, 92-108
- Yerks, R. M., & Dodson, J. D. (1908). The relationship of strength of stimulus to rapidity of habit formation. *Journal of comparative neurology and psychology*, 18, 459-482

# Thank you!